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Claims

What is claimed is:

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1. A data storage device in a form factor assembly not greater than three and one half inches comprising:
- a data disc rotatably mounted on a baseplate;
 - an actuator arm adjacent to the data disc carrying a transducer for reading data from and writing data to the data disc;
 - a printed circuit board (PCB) fastened to the baseplate having a servo controller in operable communication with the actuator arm for moving the actuator arm over the data disc;
 - a central processing unit (CPU) connected to the PCB generating control signals to the servo controller and running an operating system; and
 - memory storing an application program operably connected to the CPU, whereby the application program is run by the CPU.
2. The data storage device of claim 1 wherein the data storage device is connected to a communications network, further comprising:
- an input/output module communicating to a node connected to the communications network.
3. The data storage device of claim 2 wherein the input/output module includes a network interface module operable to communicate to a node on the network using a hypertext transport protocol.
4. The data storage device of claim 3 wherein the input/output module further includes a video interface module operable to drive a video monitor via the communications network.
5. The data storage device of claim 4 wherein the data storage device is a three and one half inch form factor assembly.

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7. A computer system comprising:
a docking station having a connector port for receiving a data storage device; and
a data storage device having a microprocessor, a memory storing an operating system
operably connected to the microprocessor operable to execute application programs, whereby the
5 microprocessor executes the operating system, an input/output module operably connected to a
communications network, and a data storage disc, the data storage device connected to the
connector port.

8. The computer system of claim 7 wherein the docking station includes a connection
10 to a communications network.

9. The computer system of claim 7 wherein the input/output module operably
communicates with a node on the communications network using a hypertext transport protocol.
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10. A method of distributing computer processing tasks comprising steps of:
connecting a plurality of intelligent storage elements to a communications bus, wherein
each intelligent storage element comprises a microprocessor, a connector port, an input/output
module, a data disc, and a servo controller for reading from and writing to the data disc;
5 assigning tasks to each of the plurality of intelligent storage elements; and
distributing data among the plurality of intelligent storage elements based on the
assigning of tasks.

11. The method of claim 10 further comprising steps of:
10 determining if a primary master intelligent storage element has crashed; and
switching to a secondary master intelligent storage element if the primary master
intelligent storage element has crashed.

12. The method of claim 11 wherein the assigning step comprises steps of:
15 selecting a first application program;
assigning the first application program to a first intelligent storage element;
selecting a second application program; and
assigning the second application program to a second intelligent storage element.

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13. A data storage device in a form factor assembly not greater than three and one half inches comprising:

a microprocessor executing application programs;

a data disc;

5 an actuator assembly rotatably mounted adjacent the data disc for positioning transducer heads relative to the data disc;

a servo control module controlling the actuator assembly;

a memory containing the operating system and operably connected to the microprocessor, whereby the microprocessor runs the operating system; and

10 a communication means operably connected to the microprocessor and the memory for communicating data stored on the data storage device to a node on a communications bus.

14. The data storage device of claim 13 wherein the data storage device is connected to a communications network, further comprising:

15 an input/output module operable to receive data from a node on the communications network.

15. The data storage device of claim 14 wherein the input/output module operably communicates with a node on the communications network using a hypertext transport protocol.

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